

ENVIRONMENTAL PROTECTION  
AGENCY

[40 CFR Part 426]

[FRL 253-5]

PRESSED AND BLOWN GLASS SEGMENT  
OF GLASS MANUFACTURING POINT  
SOURCE CATEGORY.

Proposed Effluent Limitations Guidelines  
for Existing Sources and Standards of  
Performance and Pretreatment Stand-  
ards

Notice is hereby given that effluent limitations and guidelines for existing sources and standards of performance and pretreatment standards for new sources set forth in tentative form below are proposed by the Environmental Protection Agency (EPA). On January 22, 1974, EPA promulgated a regulation adding Part 426 to title 40 of the Code of Federal Regulations (39 FR 2564). That regulation with subsequent amendments established effluent limitations and guidelines for existing sources and standards of performance and pretreatment standards for new sources for the insulation fiberglass subcategory of the glass manufacturing point source category. The regulation proposed below will amend 40 CFR, Part 426—glass manufacturing point source category by adding thereto the glass container manufacturing subcategory (Subpart H), the machine pressed and blown glass manufacturing subcategory (Subpart I), the glass tubing manufacturing subcategory (Subpart J), the television picture tube envelope manufacturing subcategory (Subpart K), the incandescent lamp envelope manufacturing subcategory (Subpart L), and the hand pressed and blown glass manufacturing subcategory (Subpart M), pursuant to sections 301, 304 (b) and (c), 306(b) and 307(c) of the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251, 1311, 1314 (b) and (c), 1316(b) and 1317(c); 86 Stat. 816 et seq.; Pub. L. 92-500) (the Act).

(a) Legal authority.—(1) Existing point sources. Section 301(b) of the Act requires the achievement by not later than July 1, 1977, of effluent limitations for point sources, other than publicly owned treatment works, which require the application of the best practicable control technology currently available as defined by the Administrator pursuant to section 304(b) of the Act. Section 301(b) also requires the achievement by not later than July 1, 1983, of effluent limitations for point sources, other than publicly owned treatment works, which require the application of best available technology economically achievable which will result in reasonable further progress toward the national goal of eliminating the discharge of all pollutants, as determined in accordance with regulations issued by the Administrator pursuant to section 304(b) of the Act.

Section 304(b) of the Act requires the Administrator to publish regulations providing guidelines for effluent limitations setting forth the degree of effluent reduction attainable through the appli-

cation of the best practicable control technology currently available and the degree of effluent reduction attainable through the application of the best control measures and practices achievable including treatment techniques, process and procedural innovations, operating methods and other alternatives. The regulation proposed herein sets forth effluent limitations and guidelines, pursuant to sections 301 and 304(b) of the Act, for the glass container manufacturing subcategory (Subpart H), the machine pressed and blown glass manufacturing subcategory (Subpart I), the glass tubing manufacturing subcategory (Subpart J), the television picture tube envelope manufacturing subcategory (Subpart K), the incandescent lamp envelope manufacturing subcategory (Subpart L), and the hand pressed and blown glass manufacturing subcategory (Subpart M), of the glass manufacturing point source category.

(2) *New sources.* Section 306 of the Act requires the achievement by new sources of a Federal standard of performance providing for the control of the discharge of pollutants which reflects the greatest degree of effluent reduction which the Administrator determines to be achievable through application of the best available demonstrated control technology, processes, operating methods, or other alternatives, including, where practicable a standard permitting no discharge of pollutants.

Section 306(b) (1) (B) of the Act requires the Administrator to propose regulations establishing Federal standards of performance for categories of new sources included in a list published pursuant to section 306(b) (1) (A) of the Act. The Administrator published in the FEDERAL REGISTER of January 16, 1973, (38 FR 1624) a list of 27 source categories, including the glass and asbestos manufacturing category. The regulations proposed herein set forth the standards of performance applicable to new sources for the glass container manufacturing Subcategory (Subpart H), the machine pressed and blown glass manufacturing subcategory (Subpart I), the glass tubing manufacturing subcategory (Subpart J), the television picture tube envelope manufacturing subcategory (Subpart K), the incandescent lamp envelope manufacturing subcategory (Subpart L), and the hand pressed and blown glass manufacturing subcategory (Subpart M), of the glass manufacturing point source category.

Section 307(c) of the Act requires the Administrator to promulgate pretreatment standards for new sources at the same time that standards of performance for new sources are promulgated pursuant to section 306. Sections 426.86, 426.96, 426.106, 426.116, 426.126, and 426.136, proposed below, provide pretreatment standards for new sources within the glass container manufacturing subcategory (Subpart H), the machine pressed and blown glass manufacturing subcategory (Subpart I), the

(Subpart J), the television picture tube envelope manufacturing subcategory (Subpart K), the incandescent lamp envelope manufacturing subcategory (Subpart L), and the hand pressed and blown glass manufacturing subcategory (Subpart M), of the glass manufacturing point source category.

Section 304(c) of the Act requires the Administrator to issue to the States and appropriate water pollution control agencies information on the processes, procedures or operating methods which result in the elimination or reduction of the discharge of pollutants to implement standards of performance under Section 306 of the Act. The report or "Development Document" referred to below provides, pursuant to Section 304(c) of the Act, information on such processes, procedures or operating methods.

(b) Summary and basis of proposed effluent limitations guidelines for existing sources and standards of performance and pretreatment standards for new sources:

(1) *General methodology.* The effluent limitations, guidelines and standards of performance proposed herein were developed in the following manner. The point source category was first studied for the purpose of determining whether separate limitations and standards are appropriate for different segments within the category. This analysis included a determination of whether differences in raw material used, product produced, manufacturing process employed, age, size, waste water constituents and other factors require development of separate limitations and standards for different segments of the point source category. The raw waste characteristics for each such segment were then identified. This included an analysis of the source, flow and volume of water used in the process employed, the sources of waste and waste waters in the operation, and the constituents of all waste water. The constituents of the waste waters which should be subject to effluent limitations and standards of performance were identified.

The control and treatment technologies existing within each segment were identified. This included an identification of each distinct control and treatment technology, including both in-plant and end-of-process technologies, which are existent or capable of being designed for each segment. It also included an identification of, in terms of the amount of constituents and the chemical, physical, and biological characteristics of pollutants, the effluent level resulting from the application of each of the technologies. The problems, limitations, and reliability of each treatment and control technology were also identified. In addition, the non-water quality environmental impact, such as the effects of the application of such technologies upon other pollution problems, including air, solid waste, noise, and radiation were identified. The energy requirements of each control and treatment technology were determined as

well as the cost of the application of such technologies.

The information, as outlined above, was then evaluated in order to determine what levels of technology constitute the "best practicable control technology currently available", "best available technology economically achievable", and the "best available demonstrated control technology, processes, operating methods, or other alternatives". In identifying such technologies, various factors were considered. These included the total cost of application of technology in relation to the effluent reduction benefits to be achieved from such application, the age of equipment and facilities involved, the process employed, the engineering aspects of the application of various types of control techniques, process changes, non-water quality environmental impact (including energy requirements) and other factors.

The data upon which the above analysis was performed included EPA permit applications, EPA sampling and inspections, consultant reports, and industry submissions.

The pretreatment standards proposed herein are intended to be complementary to the pretreatment standards proposed for existing sources under 40 CFR Part 128. The basis for such standards is set forth in the FEDERAL REGISTER of July 19, 1973, 38 FR 19236. The provisions of Part 128 are equally applicable to sources which would constitute "new sources", under section 306 if they were to discharge pollutants directly to navigable waters, except for § 128.133. That section provides a pretreatment standard for "incompatible pollutants" which requires application of the "best practicable control technology currently available", subject to an adjustment for amounts of pollutants removed by the publicly owned treatment works. Since the pretreatment standards proposed herein apply to new sources, §§ 426.86, 426.96, 426.106, 426.116, 426.126, and 426.136 below amend § 128.133 to specify the application of the standard of performance for new sources rather than the "best practicable" standard applicable to existing sources under sections 301 and 304(b) of the Act.

(2) Summary of conclusions with respect to the glass container manufacturing subcategory (Subpart H), the machine pressed and blown glass manufacturing subcategory (Subpart I), the glass tubing manufacturing subcategory (Subpart J), the television picture tube envelope manufacturing subcategory (Subpart K), the incandescent lamp envelope manufacturing subcategory (Subpart L), and the hand pressed and blown glass manufacturing subcategory (Subpart M), of the pressed and blown glass segment of the glass manufacturing point source category.

(i) *Categorization.* For the purpose of establishing effluent limitations guidelines and standards of performance, the pressed and blown glass segment of the glass manufacturing category has been divided into six categories:

(1) *Subpart H. Glass Container Manufacturing Subcategory:* This subcate-

gory includes those plants which melt raw materials at their facility and mechanically process the resultant glass into glass containers.

(2) *Subpart I. Machine Pressed and Blown Glass Manufacturing Subcategory:* This subcategory includes those plants which melt raw materials at their facility and mechanically process the resultant glass into pressed or blown glass products.

(3) *Subpart J. Glass Tubing Manufacturing Subcategory:* This subcategory includes those plants which melt raw materials at their facility and produce glass tubing as the final product.

(4) *Subpart K. Television Picture Tube Envelope Manufacturing Subcategory:* This subcategory includes those plants which melt raw materials at their facility and produce from the resultant glass, television picture tube envelopes as the final product.

(5) *Subpart L. Incandescent Lamp Envelope Manufacturing Subcategory:* This subcategory includes those plants which melt raw materials at their facility and produce incandescent lamp envelopes. This subcategory also includes those plants which frost the envelopes by etching with hydrofluoric acid (HF).

(6) *Subpart M. Hand Pressed and Blown Glass Manufacturing Subcategory:* This subcategory includes those plants which melt glass at their facility and hand process the resultant glass into pressed or blown glass products.

Factors such as raw materials used, age and size of production facilities, principal products and production processes, waste water characteristics, and applicable treatment methods substantiate and verify this subcategorization.

(ii) *Waste characteristics.* The known significant pollutant properties or constituents of waste waters resulting from the manufacture of pressed and blown glass include suspended solids, oil, and pH. In addition to these parameters, fluoride may be present to varying degrees in waste waters associated with the manufacture of television picture tube envelopes, incandescent lamp envelopes, and hand pressed and blown glassware. Lead is significant in waste waters resulting from the production of television picture tube envelopes and certain hand pressed or blown glassware. Ammonia is present in significant quantities in waste waters resulting from the frosting of incandescent lamp envelopes. Other less significant parameters associated with waste water resulting from the manufacture of pressed and blown glass are chemical oxygen demand, dissolved solids, and heat.

(iii) *Origin of waste water pollutants.* Water is used during the manufacture of pressed and blown glass for non-contact cooling, quenching of cullet, contact cooling of metallic forming or cutting devices, batch wetting, abrasive polishing, edge grinding, washing, and assorted other uses. A discussion of water usage and the source of pollutant discharges follows:

(1) *Glass container manufacturing subcategory.* Process water is used for

cullet quenching, batch wetting, contact cooling of shears, and non-contact cooling of batch feeders, melting furnaces, forming machines, and other auxiliary equipment. The principal pollutants associated with this subcategory are oil, present in the shear spray or due to leaking lubricants; suspended solids, present in the cullet quenching discharge stream; and pH.

(2) *Machine pressed and blown glass manufacturing subcategory.* The water uses and resulting pollutants associated with this subcategory are the same as those associated with glass container manufacturing.

(3) *Glass tubing manufacturing subcategory.* Process water is used for cullet quenching and for non-contact cooling of furnace walls and mandrel transmissions. The principal pollutants associated with this subcategory are oil, resulting from lubrication leaks; suspended solids, present in the cullet quench stream; and pH.

(4) *Television picture tube envelope manufacturing subcategory.* Water is used for cullet quenching, batch wetting, contact cooling of shears, non-contact cooling (of batch feeders, furnaces, presses and auxiliary equipment), abrasive polishing, edge grinding, and acid polishing. The principal pollutants associated with this subcategory are fluoride, contributed by fume scrubbers and acid polishing rinse waters; lead, present in both the abrasive and acid polishing discharge streams; suspended solids, present in the cullet quench, abrasive polishing, and edge grinding discharge streams; oil, contributed by shear spray drippage, lubrication leaks, and funnel rinse water; and pH.

(5) *Incandescent lamp envelope manufacturing subcategory.* Process water is used for non-contact cooling, cullet quenching, batch wetting, contact cooling of shears, and rinsing of frosted bulbs. The principal pollutants associated with this subcategory are fluoride, contributed by fume scrubbers and frosted bulb rinse waters; suspended solids, present in the cullet quench and frosting rinse water discharge streams; oil, contributed by shear spray drippage and lubrication leaks; ammonia, present in the frosting rinse water discharge stream; and pH.

(6) *Hand pressed and blown glass manufacturing subcategory.* Principal water usage is that contributed by the various finishing steps associated with this subcategory such as crack-off and polishing, grinding and polishing, machine cutting, alkali washing, acid-polishing, and acid etching. The usages vary greatly from plant to plant and from day to day. Negligible quantities of water are used for forming and non-contact cooling water is not required. The principal pollutants associated with this subcategory are fluoride, contributed by the acid polishing and etching rinse waters; lead, contributed by the acid treatment of leaded glass; suspended solids, present in the discharge waters of all finishing steps; and pH.

(iv) *Treatment and control technology.* Waste water treatment and control technologies have been studied for each subcategory of the industry to determine what is (a) the best practicable control technology currently available, (b) the best available technology economically achievable, and (c) the best available demonstrated control technology, processes, operating methods or other alternatives. Such technologies as coagulation, sedimentation, oil separation, lime precipitation, ion-exchange, ammonia stripping, and filtration have been considered and recommended as proven methods of control and treatment of waste waters from the pressed and blown glass segment of the glass manufacturing category. Many of these technologies are currently practiced within the industry; all are readily transferable due to their wide practice within other industrial categories or within the field of water treatment.

The following is a discussion of the control and treatment technologies recommended for each subcategory as best practicable control technology economically achievable.

(1) Recommended control and treatment—glass container manufacturing subcategory. Both in-plant techniques and end-of-pipe methods have been employed by plants of this subcategory to reduce pollutant discharge. Best practicable control technology currently available would require that a typical plant using 2920 l/metric ton (700 gal/ton) of combined process and non-contact cooling water achieve effluent levels of 24 mg/l for suspended solids and 10 mg/l for oil. A plant with segregation of process and noncontact cooling water would be required to attain effluent concentration levels of approximately double the aforementioned with regard to the process water stream as this stream accounts for approximately forty-seven percent of the combined flow. These levels are considered to be typical of current operation and are presently achieved by 70 percent of the 40 plants for which effluent data is available. These effluent levels are readily achievable by all plants within this subcategory through normal maintenance and clean-up operations within the plant and represent the raw waste loadings expected from a glass container plant. Some plants may need to improve house-keeping to achieve the recommended effluent levels, while others may elect to provide end-of-pipe treatment in the form of some type of sedimentation system with oil removal capabilities. It is felt however, that in-plant techniques will be a more effective and a considerably less expensive means of achieving the recommended effluent limitations and best practicable control technology currently available is based on this contention.

Best available technology economically achievable recommends that the cullet quench waste water stream be segregated from the non-contact cooling water stream, that the cullet quench stream be recirculated through a gravity separator

with treatment of the blowdown by dissolved air flotation, and that the effluent from the dissolved air flotation system be filtered through diatomaceous earth. This will further reduce oil and suspended solids in the discharge stream to less than 5 mg/l and will reduce the contact water discharge flow from 1540 l/metric ton (370 gal/ton) to 77 l/metric ton (18.5 gal/ton).

(2) Recommended control and treatment—machine pressed and blown glass manufacturing subcategory. The in-plant control and end-of-pipe treatment methods employed in the machine pressed and blown glass manufacturing subcategory are those used in the glass container manufacturing subcategory. Best practicable control technology currently available would require that a typical plant using 5630 l/metric ton (1350 gal/ton) of combined process and non-contact cooling water achieve effluent levels of 25 mg/l for suspended solids and 10 mg/l for oil. A plant with segregation of process and non-contact cooling water would be required to attain effluent concentration levels of approximately double the aforementioned with regard to the process water stream as this stream accounts for approximately forty-eight percent of the combined flow. These effluent levels are readily achievable by all plants within the subcategory with a minimum of in-plant controls or end-of-pipe treatment.

Best available technology economically achievable involves the segregation of cullet quench from noncontact cooling waters, the recirculation of the cullet quench stream through a gravity separator with treatment of the blowdown by dissolved air flotation, and the diatomaceous earth filtration of the effluent from the dissolved air flotation system. This will further reduce oil and suspended solids in the discharge stream to less than 5 mg/l and will reduce the contact water discharge flow from 2920 l/metric ton (700 gal/ton) to 370 l/metric ton (88 gal/ton).

(3) Recommended control and treatment—glass tubing manufacturing subcategory. Owing to the high quality erratic discharge of cullet quench water from plants within this subcategory, no plants presently employ end-of-pipe treatment. Best practicable control technology currently available would require that a typical plant using 8340 l/metric ton (2000 gal/ton) of combined process and non-contact cooling water achieve effluent levels of 27 mg/l for suspended solids and 10 mg/l for oil. All four of the plants for which effluent data are available presently achieve the recommended levels. These effluent levels are readily achievable by all plants within this subcategory with a minimum of in-plant control in the form of house-keeping techniques.

The best available technology economically achievable involves the segregation of the cullet quench from the non-contact cooling water stream, the recirculation of the cullet quench water stream, and treatment of the blowdown

from the cullet quench recirculation system by diatomaceous earth filtration. This will further reduce oil and suspended solids in the discharge stream to less than 5 mg/l and will reduce the contact water discharge from 420 l/metric ton (100 gal/ton) to 21 l/metric ton (5 gal/ton).

(4) Recommended control and treatment—television picture tube envelope manufacturing subcategory. Television picture tube envelope plants currently employ in-plant methods of water conservation and end-of-pipe treatment for fluoride, lead, and suspended solids removal. All of the plants for which information is available treat abrasive and acid polishing waste waters by lime precipitation with the pH being adjusted where necessary. It is this technology upon which the best practicable control technology currently available is based. A typical plant discharging 4420 l/metric ton (1060 gal/ton) of finishing waste water would be required to achieve effluent levels of 15 mg/l of fluoride and 1 mg/l of lead for that waste water stream. The same typical plant which discharges 12,500 l/metric ton (3000 gal/ton) of finishing waste water and combined cullet quench and non-contact cooling water would be required to achieve effluent levels of 10 mg/l of suspended solids and oil, 5.2 mg/l of fluoride, and 0.35 mg/l of lead in the total waste water stream. All plants within this subcategory are either currently achieving these levels or can achieve these levels by upgrading the operation of existing treatment systems and/or improving house-keeping to minimize pollutant discharge.

Best available technology economically achievable involves the sand filtration of the lime treated effluent to further remove fluoride and lead precipitates, and the passage of the effluent from the sand filter through a bed of activated alumina, thus further removing fluoride. This technology will allow the typical plant to achieve effluent levels of 10 mg/l of oil, 5 mg/l of suspended solids, 0.71 mg/l of fluoride, and 0.35 mg/l of lead in the total discharge stream.

(5) Recommended control and treatment—incandescent lamp envelope manufacturing subcategory. The present level of treatment within the incandescent lamp envelope manufacturing subcategory involves oil separation and sedimentation applied to the cullet quench water stream and lime treatment for fluoride and suspended solids removal from frosting waste waters.

Best practicable control technology currently available includes the present state-of-the-art for treatment of waste waters within the subcategory and the addition of steam stripping for ammonia removal and a recarbonation system for pH adjustment of the frosting waste water discharge stream. A typical plant using 4500 l/metric ton (1080 gal/ton) of combined noncontact cooling and cullet quench water would be required to achieve effluent levels of 25 mg/l of oil and suspended solids in this waste water

stream. The typical plant also discharges 3420 l/metric ton (820 gal/ton) of frosting waste water; effluent levels of 25 mg/l of suspended solids, 20 mg/l of fluoride, and 30 mg/l of ammonia are readily attainable after treatment of this waste stream. Plants not currently achieving these effluent levels can add to their present treatment system an ammonia removal system and a recarbonation system and can upgrade their present systems to optimize suspended solids removal by better controlling flocculation, adding polyelectrolyte or other coagulant aids recirculating sludge, or reducing weir overflow rates.

Best available technology economically achievable includes the sand filtration of the effluent from the lime precipitation system, activated alumina filtration of the effluent from the sand filters, and diatomaceous earth filtration of the cullet quench waste water stream. This technology will allow a typical plant to achieve effluent levels of 5 mg/l for suspended solids and oil in the cullet quench waste water stream, and 5 mg/l of suspended solids and 2 mg/l of fluoride in the frosting waste water stream. These technologies are not current industry practice but have been employed for many years in the field of water treatment.

(6) Recommended control and treatment—hand pressed and blown glass manufacturing subcategory. Very limited data are available on the hand pressed and blown industry with regard to effluent discharge. Owing to the low waste water volumes, the lack of sufficient quantities of cooling water that could be used for dilution, and the very limited data available, achievable effluent levels in the hand pressed and blown glass subcategory are expressed in terms of concentrations (mg/l). Waste water constituents requiring control are suspended solids, fluoride, and lead.

Best practicable control technology currently available requires that effluent concentrations of 25 mg/l for suspended solids, 15 mg/l for fluoride, and 1.0 mg/l for lead be attained. Most plants do not make leaded glass and for these plants, lead is not a problem. Many plants do not acid etch or polish glass and therefore, do not have a fluoride problem. Methods of achieving the best practicable control technology currently available include sedimentation, clarification, land disposal, improved house-keeping techniques, and batch lime precipitation.

Best available technology economically achievable requires that effluent levels of 5 mg/l for suspended solids, 2 mg/l for fluoride, and 0.1 mg/l for lead be attained. This involves sand filtration in all cases, and the use of activated alumina to further remove fluorides in those cases where hydrofluoric acid is used to etch or polish glassware.

*Solid waste control.* The application of these technologies requires that solid waste control be considered. Best practicable control technology and best available control technology as they are

known today, require disposal of the pollutants removed from waste waters produced within this industry segment in the form of solid wastes or liquid concentrates. In most cases these are non-hazardous substances requiring only minimal custodial care. However, some constituents may be hazardous and may require special consideration. In order to ensure long-term protection of the environment from any hazardous or harmful constituents, special consideration of disposal sites must be made. All landfill sites where such hazardous wastes are disposed should be selected so as to prevent horizontal and vertical migration of these contaminants to ground or surface waters.

In cases where geologic conditions may not reasonably ensure this, adequate legal and mechanical precautions (e.g., impervious liners) should be taken to ensure long term protection to the environment from hazardous materials. Where appropriate, the location of solid hazardous materials disposal sites should be permanently recorded in the appropriate office of legal jurisdiction. It should be noted that there is no evidence that the application of the recommended control and treatment technologies will result in any unusual solid waste disposal problems.

(v) *Cost estimates for control of waste water pollutants.* The capital and total yearly costs to the pressed and blown glass segment of the glass manufacturing category to achieve the proposed best practicable control technology currently available effluent limitations guidelines are estimated to be \$2.67 million and \$0.966 million respectively. This estimate is based on the assumption that only surface dischargers are affected by the proposed guidelines. There are: (a) 55 known glass container, (b) 23 known machine pressed and blown glass, (c) 9 known glass tubing, (d) 4 known television picture tube envelope, (e) 3 known incandescent lamp envelope, and (f) 13 known hand pressed and blown glass manufacturing surface dischargers. This estimate of surface dischargers is based on RAPP applications, industry supplied data, and a survey of the pressed and blown glass segment. The Agency is requesting additional information with regard to surface dischargers at this time.

The capital and total yearly costs to the pressed and blown glass segment of the glass manufacturing category to achieve the proposed best available technology economically achievable effluent limitations guidelines are estimated to be \$27.7 and \$0.59 million respectively. This estimate is based on the assumption that only surface dischargers are affected by the proposed guidelines with no credit given for those facilities which currently employ all or a portion of the best available technology economically achievable. This estimate also includes those costs associated with best practicable control technology currently available.

(vi) *Energy requirements and non-water quality environmental impacts.* It is estimated that the equivalent of eighteen million and thirty-one million kilowatt hours of electricity are required to achieve the best practicable control technology currently available and the best available technology economically achievable, respectively. This amounts to a less than one percent increase in an individual plant's current energy requirement in all subcategories with the exception of the incandescent lamp envelope manufacturing subcategory. The steam stripping of ammonia, on which best practicable control technology currently available for that subcategory is based, is a high energy user and results in an eight percent increase over current energy requirements. The 650 mg/l raw waste discharges of ammonia necessitate its removal to ensure environmental protection.

With the exception of ammonia removal, required for the incandescent lamp envelope subcategory, there is no evidence that application of the proposed effluent limitations guidelines will result in any unusual air or solid waste disposal problems. The ammonia stripped from incandescent lamp envelope frosting waste waters will be discharged to the atmosphere but methods are available to reduce the concentrations to below the threshold of odor.

(vii) *Economic impact analysis.* A preliminary assessment of the effects of BPCTCA, BATEA, and NSPS costs for the industry indicated that only two of the six subcategories—machine pressed and blown glass manufacturing and hand pressed and blown glass manufacturing—could face potential impacts under the proposed guidelines. Hence, detailed economic analysis was carried out only for those two sectors.

Adverse economic impacts as the result of BPCTCA effluent limitations guidelines are expected to occur only in the hand pressed and blown glass manufacturing subcategory. Between 3 and 5 closures are anticipated primarily because of the inability of some firms in this subcategory to raise the capital necessary to purchase pollution control systems for treatment of hydrofluoric acid etching wastes. However, only 46 percent of the hand pressed and blown glass manufacturing subcategory performs acid etching. The plants which do not acid etch will be able to meet the guidelines with a substantially lower capital investment.

The threatened plants represent between 10 and 15 percent of segment capacity and about 700 to 1,000 employees. In addition, some regional effects may arise due to the fact that hand pressed and blown glass manufacturing plants are concentrated in the Ohio-West Virginia area. Price increases necessary to recover annual BPCTCA costs (including depreciation and cost of capital) should be modest—approximately 1.8 percent for those plants with acid etching and about 0.9 percent for those plants without acid etching.

Plants in the incandescent lamp envelope manufacturing subcategory will have to make significant expenditures to achieve BPCTCA effluent limitations guidelines, but no adverse effects are expected. The estimated price increase is about 1.0 percent.

None of the remaining four subcategories—machine pressed and blown glass manufacturing, glass container manufacturing, television picture tube envelope manufacturing and glass tubing manufacturing—should face any significant impacts under the proposed BPCTCA guidelines. This is based on the assumption that plants in these subcategories will be able to meet the proposed BPCTCA limitations without new investment. Some industry comments state that a few plants may, in fact, require modification in order to comply with proposed BPCTCA limitations. The Agency is requesting additional cost information for such plants, and in the event significant plant modification costs are identified, the impact analysis will be reevaluated.

The proposed BATEA effluent limitations guidelines should not cause any significant economic impacts. Price increases necessary to maintain current profit levels should be less than 2.4 percent, and no further plant closures have been projected.

The proposed effluent limitations guidelines are not expected to have any noticeable effect on balance of payments or overall industry growth, although growth in the machine pressed and blown glass manufacturing subcategory may be hindered due to the diversion of capital into pollution control equipment.

The report entitled "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Standards for the Pressed and Blown Glass Segment of the Glass Manufacturing Point Source Category" details the analysis undertaken in support of the regulation being proposed herein and is available for inspection in the EPA Information Center, Room 227, West Tower, Waterside Mall, Washington, D.C., at all EPA regional offices, and at State water pollution control offices. A supplementary analysis prepared for EPA of the possible economic effects of the proposed regulation is also available for inspection at these locations. Copies of both of these documents are being sent to persons or institutions affected by the proposed regulation, or who have placed themselves on a mailing list for this purpose (see EPA's Advance Notice of Public Review Procedures, 38 FR 21202, August 6, 1973). An additional limited number of copies of both reports are available. Persons wishing to obtain a copy may write the EPA Information Center, Environmental Protection Agency, Washington, D.C. 20460, Attention: Mr. Phillip B. Wisman.

On June 14, 1973, the Agency published procedures designed to ensure that, when certain major standards, regulations, and guidelines are proposed, an explanation of their basis, purpose and en-

vironmental effects is made available to the public (38 FR 15653). The procedures are applicable to major standards, regulations, and guidelines which are proposed on or after December 31, 1973, and which prescribe national standards of environmental quality or require national emission, effluent, or performance standards and limitations.

The Agency determined to implement these procedures in order to insure that the public was apprised of the environmental effects of its major standards setting actions and was provided with detailed background information to assist it in commenting on the merits of a proposed action. In brief, the procedures call for the Agency to make public the information available to it delineating the major nonenvironmental factors affecting the decision, and to explain the viable options available to it and the reasons for the option selected.

The procedures contemplate publication of this information in the FEDERAL REGISTER, where this is practicable. They provide, however, that where, because of the length of these materials, such publication is impracticable, the material may be made available in an alternate format.

The report entitled "Development Document for Proposed Effluent Limitations Guidelines and New Source Performance Standards for the Pressed and Blown Glass Segment of the Glass Manufacturing Point Source Category" contains information available to the Agency concerning the major environmental effects of the regulation proposed below, including:

(1) The pollutants presently discharged into the Nation's waterways by manufacturers of pressed and blown glass and the degree of pollution reduction attainable from implementation of the proposed guidelines and standards (see particularly sections IV, V, VI, IX, X, and XI);

(2) The anticipated effects of the proposed regulation on other aspects of the environment including air, solid waste disposal and land use, and noise (see particularly section VIII); and

(3) Options available to the Agency in developing the proposed regulatory system and the reasons for its selecting the particular levels of effluent reduction which are proposed (see particularly sections VI, VII, and VIII).

The supplementary report entitled "Economic Analysis of Proposed Effluent Guidelines for the Pressed and Blown Glass Industry" contains an estimate of the cost of pollution control requirements and an analysis of the possible effects of the proposed regulation on prices, production levels, employment, communities in which pressed and blown glass manufacturing plants are located, and international trade. In addition, the Development Document describes, in section VIII, the cost and energy consumption implications of the proposed regulations.

The two reports described above in the aggregate exceed 200 pages in length and contain a substantial number of

charts, diagrams, and tables. It is clearly impracticable to publish the material contained in these documents in the FEDERAL REGISTER. To the extent possible, significant aspects of the material have been presented in summary form in foregoing portions of this preamble. Additional discussion is contained in the following analysis of comments received and the Agency's response to them. As has been indicated, both documents are available for inspection at the Agency's Washington, D.C. and regional offices and at State water pollution control agency offices. Copies of each have been distributed to persons and institutions affected by the proposed regulations or who have placed themselves on a mailing list for this purpose. Finally, so long as the supply remains available, additional copies may be obtained from the Agency as described above.

When this regulation is promulgated, revised copies of the Development Document will be available from the Superintendent of Documents, Government Printing Office, Washington, D.C. 20402. Copies of the Economic Analysis will be available through the National Technical Information Service, Springfield, Virginia 22151.

(c) *Summary of public participation.* Prior to this publication, the agencies and groups listed below were consulted and given an opportunity to participate in the development of effluent limitations, guidelines, and standards proposed for the pressed and blown glass segment of the glass manufacturing category. All participating agencies have been informed of project developments. An initial draft of the Development Document was sent to all participants and comments were solicited on that report. The following are the principal agencies and groups consulted: (1) Effluent Standards and Water Quality Information Advisory Committee (established under section 515 of the Act); (2) all State and U.S. Territory Pollution Control Agencies; (3) Ohio River Valley Sanitation Commission; (4) New England Interstate Water Pollution Control Commission; (5) Delaware River Basin Commission; (6) Hudson River Sloop Restoration, Inc.; (7) Conservation Foundation; (8) Environmental Defense Fund; (9) Natural Resources Defense Council; (10) The American Society of Civil Engineers; (11) Water Pollution Control Federation; (12) National Wildlife Federation; (13) The American Society of Mechanical Engineers; (14) U.S. Department of Commerce; (15) U.S. Department of the Interior; (16) Glass Container Manufacturers Institute; (17) Consolidated Gas Supply Corporation; (18) Glass Containers Corporation; (19) West Virginia Glass Specialty Company; (20) Viking Glass Company; (21) Louie Glass Company; (22) Pilgrim Glass Corporation; (23) Colonial Glass Company; (24) Kopp Glass Inc.; (25) Owens-Illinois; (26) Fenton Art Glass Company; (27) Westinghouse Electric Company; (28) Federal Glass Company; (29) Thatcher Glass Manufacturing Company; (30) Fostoria Glass Com-

pany; (31) Minners Glass Company; (32) Gillender Brothers, Inc.; (33) Corning Glass Works; (34) General Electric Company; and (35) Ball Corporation.

The following responded with comments: U.S. Water Resources Council; Delaware River Basin Commission; Minnesota Pollution Control Agency; Owens-Illinois; Glass Container Manufacturers Institute; State of Michigan, Department of Natural Resources; General Electric Company; and North Carolina Department of Natural & Economic Resources.

The primary issues raised in the development of the proposed effluent limitations guidelines and standards of performance and the treatment of these issues herein are as follows:

(1) A common criticism was that pretreatment standards were omitted from the draft development document. It was stated that both pretreatment standards and effluent limitations guidelines were necessary in order that the pressed and blown glass industry can make firm engineering and economic commitments.

It has been Agency policy to propose pretreatment standards at the time of promulgation of effluent limitations guidelines. However, the Agency would welcome, at this time, data or suggestions pertaining to pretreatment standards for the pressed and blown glass segment of the glass manufacturing category.

(2) The comment was received that the data base on which the guidelines are based is inadequate and that the Agency should extensively sample the pressed and blown glass segment to develop a more thorough and reliable data base.

All available data pertaining to the pressed and blown glass segment has been analyzed and engineering judgments made based upon this data. The Agency feels that the data base is adequate but does solicit any additional data which supports or contradicts the findings expressed in the draft development document.

(3) The comment was made that the age of a facility should be a factor with regard to the subcategorization of the pressed and blown glass segment with the recommendation that a range of values be specified which would reflect the age of an individual facility.

The available data does not support this contention. However, the Agency solicits information which substantiates this claim. Information showing the relationship of investment required to attain effluent limitations guidelines, water usage, or waste loadings to age of a facility would be particularly useful in supporting the hypothesis that age is an important factor affecting subcategorization of the industry segment.

(4) An objection was made to the inclusion of noncontact cooling water flow in the characterization of the typical plant on which the BPCTCA guidelines for the glass container, machine pressed and blown, television picture tube envelope, and glass tubing manufacturing subcategories are based. It was stated that while on a weight basis the recom-

mended guidelines are achievable in most cases, industry feels that concentration limits will be violated when waste streams are segregated and recirculation systems are employed during the interim period between 1977 and 1983 in order that BATEA limitations be attained.

Effluent limitations guidelines will be applied consistent with a schedule of compliance leading to achievement of levels of abatement required by the Act. Such limitations as are required by effluent limitations guidelines will be stated in quantitative terms, i.e., unit of weight per unit of time (kg/day) for each pollutant limited. Qualitative limitations (i.e., concentration) set at a fixed level are not consistent with fixed quantitative limitations in a variable or reducing flow context, but may be required by State authority preserved under Section 510 of the Act. In such a situation, the more stringent effective limitation would be observed.

(5) The comment was made that the 20 mg/l level for fluoride which the draft development document states that the typical incandescent lamp envelope manufacturing plant can achieve is too stringent and inconsistent with an NPDES permit which is now being written. The commenter recommended that the 32 mg/l level which their plant is now achieving is a more realistic level.

The development document presents findings of an extensive survey of the entire subcategory rather than of a single plant. The available data supports the proposed effluent limitations guidelines.

(6) The comment was made that because no plants in the incandescent lamp envelope manufacturing subcategory are currently treating the 650 mg/l concentrations of ammonia discharged by the typical plant, ammonia removal techniques are not best practicable control technology currently available and until more research is done, do not even qualify as best available technology economically achievable.

The high levels of ammonia which occur in waste waters associated with the incandescent lamp envelope manufacturing subcategory are capable of producing adverse biological effects. The present degree of treatment within this subcategory has been judged to be inadequate with regard to ammonia removal. Many ammonia removal techniques exist and the deficiency of plants within this subcategory with regard to treatment of ammonia necessitates a transfer of technology from other point source categories. Waste waters from plants within this subcategory are currently treated to remove fluorides by the addition of lime to a pH of 11 causing the precipitation of calcium fluoride. This high pH makes the air or steam stripping of ammonia a rather attractive method of treatment. The technique on which effluent limitations guidelines are based is steam stripping which is well demonstrated in the fertilizer, petroleum and petrochemical and steel industries.

(7) The comment was made that the proposed recommendations for BATEA will result in essentially zero discharge of pollutants and the need for the optimistic technology transfer predictions and the extremely low effluent levels recommended was not understood.

The Act declares that the national goal is the elimination of discharge of pollutants by 1985. The proposed effluent limitations guidelines fulfill the requirement of progress toward this national goal. The technologies on which BATEA effluent limitations guidelines are based are well demonstrated by their application to treatment of waste waters associated with other industrial categories or application in the field of water treatment.

(8) The comment was made that the costs presented in the draft development document for typical plants are not representative of all the plants within the various subcategories.

The technologies currently employed by plants within these various subcategories of the pressed and blown glass segment are considered acceptable as BPCTCA. There is therefore, no expected significant increase in capital investment, the only requirement being that plants operate existing pollution control and treatment equipment properly or improve housekeeping techniques to control raw waste loadings. The Agency does, however, solicit data which support or contradict this contention. The fact that the recommended levels are achievable is demonstrated by the high percentage of plants for which data is available that currently meet the BPCTCA requirements.

Interested persons may participate in this rulemaking by submitting written comments in triplicate to the EPA Information Center, Environmental Protection Agency, Washington, D.C. 20460. Attention: Mr. Philip B. Wisman. Comments on all aspects of the proposed regulation are solicited. In the event comments are in the nature of criticisms as to the adequacy of data which are available, or which may be relied upon by the Agency, comments should identify and, if possible, provide any additional data which may be available and should indicate why such data are essential to the development of the regulations. In the event comments address the approach taken by the Agency in establishing an effluent limitations guideline or standard of performance, EPA solicits suggestions as to what alternative approach should be taken and why and how this alternative better satisfies the detailed requirements of sections 301, 304(b), 306, and 307 of the Act.

A copy of all public comments will be available for inspection and copying at the EPA Information Center, Room 227, West Tower, Waterside Mall, 401 M Street SW., Washington, D.C. A copy of preliminary draft contractor reports, the Development Document, and economic study referred to above, and certain supplementary materials supporting the study of the industry concerned will also

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be maintained at this location for public review and copying. The EPA information regulation, 40 CFR Part 2, provides that a reasonable fee may be charged for copying.

All comments received on or before September 20, 1974, will be considered. Steps previously taken by the Environmental Protection Agency to facilitate public response within this time period are outlined in the advance notice concerning public review procedures published on August 6, 1973 (38 FR 21202).

Dated: August 13, 1974.

JOHN QUARLES,  
Acting Administrator.

**PART 426—EFFLUENT LIMITATIONS AND GUIDELINES FOR EXISTING SOURCES AND STANDARDS OF PERFORMANCE AND PRETREATMENT STANDARDS FOR NEW SOURCES FOR THE GLASS CONTAINER MANUFACTURING POINT SOURCE CATEGORY**

**Subpart H—Glass Container Manufacturing Subcategory**

- Sec. 426.80 Applicability; description of the glass container manufacturing subcategory.
- 426.81 Specialized definitions.
- 426.82 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 426.83 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 426.84 [Reserved]
- 426.85 Standards of performance for new sources.
- 426.86 Pretreatment standards for new sources.

**Subpart I—Machine Pressed and Blown Glass Manufacturing Subcategory**

- 426.90 Applicability; description of the machine pressed and blown glass manufacturing subcategory.
- 426.91 Specialized definitions.
- 426.92 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 426.93 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 426.94 [Reserved]
- 426.95 Standards of performance for new sources.
- 426.96 Pretreatment standards for new sources.

**Subpart J—Glass Tubing Manufacturing Subcategory**

- 426.100 Applicability; description of the glass tubing manufacturing subcategory.
- 426.101 Specialized definitions.
- 426.102 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

- Sec. 426.103 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

- 426.104 [Reserved]
- 426.105 Standards of performance for new sources.
- 426.106 Pretreatment standards for new sources.

**Subpart K—Television Picture Tube Envelope Manufacturing Subcategory**

- 426.110 Applicability; description of the television picture tube envelope manufacturing subcategory.
- 426.111 Specialized definitions.
- 426.112 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 426.113 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 426.114 [Reserved]
- 426.115 Standards of performance for new sources.
- 426.116 Pretreatment standards for new sources.

**Subpart L—Incandescent Lamp Envelope Manufacturing Subcategory**

- 426.120 Applicability; description of the incandescent lamp envelope manufacturing subcategory.
- 426.121 Specialized definitions.
- 426.122 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 426.123 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 426.124 [Reserved]
- 426.125 Standards of performance for new sources.
- 426.126 Pretreatment standards for new sources.

**Subpart M—Hand Pressed and Blown Glass Manufacturing Subcategory**

- 426.130 Applicability; description of the hand pressed and blown glass manufacturing subcategory.
- 426.131 Specialized definitions.
- 426.132 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.
- 426.133 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.
- 426.134 [Reserved]
- 426.135 Standards of Performance for new sources.
- 426.136 Pretreatment standards for new sources.

**AUTHORITY:** Secs. 301, 304(b)<sup>27</sup> and (c), 306(b) and 307(c), Federal Water Pollution Control Act, as amended (33 U.S.C. 1251, 1311, 1314 (b) and (c), 1316(b) and 1317(c); 86 Stat. et seq.; Pub L. 92-500) (the Act)

**Subpart H—Glass Container Manufacturing Subcategory**

**§ 426.80 Applicability; description of the glass container manufacturing subcategory.**

The provisions of this subpart are applicable to discharges resulting from the process by which raw materials are melted in a furnace and mechanically processed into glass containers.

**§ 426.81 Specialized definitions.**

For the purpose of this subpart:

(a) Except as provided below, the (except for definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "furnace pull" shall mean that amount of glass drawn from the glass furnace or furnaces.

(c) The term "oil" shall mean those components of a waste water amenable to measurement by the method described in "Methods for Chemical Analysis of Water and Wastes", 1971, Environmental Protection Agency, Analytical Quality Control Laboratory, page 217.

**§ 426.82 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.**

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Pro-

tection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations. The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) g/kg of furnace pull		
Oil	60.0	30.0
TSS	140.0	70.0
pH	Within the range 6.0 to 9.0.	
(English units) lb/1000 lb of furnace pull		
Oil	0.06	.03
TSS	0.14	.07
pH	Within the range 6.0 to 9.0.	

**§ 426.83** Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) g/kg of furnace pull		
Oil	0.8	0.4
TSS	0.8	.4
pH	Within the range 6.0 to 9.0.	
(English units) lb/1000 lb of furnace pull		
Oil	0.0008	.0004
TSS	0.0008	.0004
pH	Within the range 6.0 to 9.0.	

**§ 426.84** [Reserved]

**§ 426.85** Standards of performance for new sources.

The following standards of performance establish the quantity or quality of

pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) g/kg of furnace pull		
Oil	0.8	0.4
TSS	.8	.4
pH	Within the range 6.0 to 9.0.	
(English units) lb/1000 lb of furnace pull		
Oil	0.0008	.0004
TSS	0.0008	.0004
pH	Within the range 6.0 to 9.0.	

**§ 426.86** Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the glass container manufacturing subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter, except that, for the purpose of this section, § 128.133 of this chapter, shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131 of this chapter, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in § 426.85; *Provided*, That, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant."

**Subpart I—Machine Pressed and Blown Glass Manufacturing Subcategory**

**§ 426.90** Applicability; description of the machine pressed and blown glass manufacturing subcategory.

The provisions of this subpart are applicable to discharges resulting from the process by which raw materials are melted in a furnace and mechanically processed into pressed or blown glassware.

**§ 426.91** Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in part 401

of this chapter shall apply to this subpart.

(b) The term "furnace pull" shall mean that amount of glass drawn from the glass furnace or furnaces.

(c) The term "oil" shall mean those components of a waste water amenable to measurement by the method described in "Methods for Chemical Analysis of Water and Wastes", 1971, Environmental Protection Agency, Analytical Quality Control Laboratory, page 217.

**§ 426.92** Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry sub-categorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations. The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:



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Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) g/kg of furnace pull		
Oil	112.0	56.0
TSS	280.0	140.0
pH	Within the range 6.0 to 9.0.	
(English units) lb/1000 lb of furnace pull		
Oil	0.112	.056
TSS	0.28	.14
pH	Within the range 6.0 to 9.0.	

§ 426.93 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) g/kg of furnace pull		
Oil	3.6	1.8
TSS	3.6	1.8
pH	Within the range 6.0 to 9.0.	
(English units) lb/1000 lb of furnace pull		
Oil	0.0036	.0018
TSS	0.0036	.0018
pH	Within the range 6.0 to 9.0.	

§ 426.94 [Reserved]

§ 426.95 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) g/kg of furnace pull		
Oil	3.6	1.8
TSS	3.6	1.8
pH	Within the range 6.0 to 9.0.	
(English units) lb/1000 lb of furnace pull		
Oil	0.0036	.0018
TSS	0.0036	.0018
pH	Within the range 6.0 to 9.0.	

§ 426.96 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the machine pressed and blown glass manufacturing subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this Chapter, except that, for the purpose of this section, § 128.133 of this Chapter shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131 of this Chapter, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in § 426.95: *Provided*, That, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant."

Subpart J—Glass Tubing Manufacturing

§ 426.100 Applicability; description of the glass tubing manufacturing subcategory.

The provisions of this subpart are applicable to discharges resulting from the process by which raw materials are melted in a furnace and mechanically processed into glass tubing as a final product.

§ 426.101 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this Chapter shall apply to this subpart.

(b) The term "furnace pull" shall mean that amount of glass drawn from the glass furnace or furnaces.

(c) The term "oil" shall mean those components of a waste water amenable to measurement by the method described in "Methods for Chemical Analysis of Water and Wastes," 1971, Environmental Protection Agency, Analytical Quality Control Laboratory, page 217.

§ 426.102 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategory and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharge effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental

Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceeding to revise these regulations. The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) g/kg of furnace pull		
Oil	170.0	85.0
TSS	460.0	230.0
pH	Within the range 6.0 to 9.0.	
(English units) lb/1000 lb of furnace pull		
Oil	0.17	.035
TSS	0.46	.23
pH	Within the range 6.0 to 9.0.	

§ 426.103 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) g/kg of furnace pull		
Oil	0.2	0.1
TSS	0.2	.1
pH	Within the range 6.0 to 9.0.	
(English units) lb/1000 lb of furnace pull		
Oil	0.0002	.0001
TSS	0.0002	.0001
pH	Within the range 6.0 to 9.0.	

§ 426.104 [Reserved]

§ 426.105 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) g/kg of furnace pull		
Oil	0.2	0.1
TSS	0.2	.1
pH	Within the range 6.0 to 9.0.	
(English units) lb/1000 lb of furnace pull		
Oil	0.0002	0.0001
TSS	0.0002	.0001
pH	Within the range 6.0 to 9.0.	

§ 426.106 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the glass tubing manufacturing subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in part 128 of this chapter, except that, for the purpose of this section, § 128.133 of this chapter shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131 of this chapter, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in § 426.105; *Provided*, That, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant."

Subpart K—Television Picture Tube Envelope Manufacturing Subcategory

§ 426.110 Applicability; description of the television picture tube envelope manufacturing subcategory.

The provisions of this subpart are applicable to discharges resulting from the process by which raw materials are melted in a furnace and processed into television picture tube envelopes.

§ 426.111 Specialized definitions.

For the purpose of this subpart:  
(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "furnace pull" shall mean that amount of glass drawn from the glass furnace or furnaces.

(c) The term "oil" shall mean those components of a waste water amenable to measurement by the method described in "Methods for Chemical Analysis of Water and Wastes," 1971, Environmental Protection Agency, Analytical Quality Control Laboratory, page 217.

§ 426.112 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategory and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations. The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) g/kg of furnace pull		
Oil	250.0	120.0
TSS	250.0	120.0
Fluoride	150.0	65.0
Lead	0.6	4.5
pH	Within the range 6.0 to 9.0.	
(English units) lb/1,000 lb of furnace pull		
Oil	0.25	.12
TSS	0.25	.12
Fluoride	0.15	.065
Lead	0.0006	.0045
pH	Within the range 6.0 to 9.0.	

**§ 426.113 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.**

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) g/kg of furnace pull		
Oil.....	260.0.....	130.0
TSS.....	120.0.....	60.0
Fluoride.....	18.0.....	9.0
Lead.....	0.9.....	.45
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1000 lb of furnace pull		
Oil.....	0.26.....	.13
TSS.....	0.12.....	.06
Fluoride.....	0.018.....	.009
Lead.....	0.0009.....	.00045
pH.....	Within the range 6.0 to 9.0.	

**§ 426.114 [Reserved]**

**§ 426.115 Standards of performance for new sources.**

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) g/kg of furnace pull		
Oil.....	260.0.....	130.0
TSS.....	120.0.....	60.0
Fluoride.....	18.0.....	9.0
Lead.....	0.9.....	.45
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1000 lb of furnace pull		
Oil.....	0.26.....	.13
TSS.....	0.12.....	.06
Fluoride.....	0.018.....	.009
Lead.....	0.0009.....	.00045
pH.....	Within the range 6.0 to 9.0.	

**§ 426.116 Pretreatment standards for new sources.**

The pretreatment standards under section 307(c) of the Act for a source within the television picture tube en-

velope manufacturing subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in Part 128 of this chapter, except that, for the purpose of this section, § 128.133 of this chapter shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131 of this chapter, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in § 426.115: *Provided*, That, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant."

**Subpart L—Incandescent Lamp Envelope Manufacturing Subcategory**

**§ 426.120 Applicability; description of the incandescent lamp envelope manufacturing subcategory.**

The provisions of this subpart are applicable to discharges resulting from the processes by which (a) raw materials are melted in a furnace and mechanically processed into incandescent lamp envelopes and (b) incandescent lamp envelopes are etched with hydrofluoric acid to produce frosted envelopes.

**§ 426.121 Specialized definitions.**

For the purpose of this subpart:  
 (a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in part 401 of this chapter shall apply to this subpart.  
 (b) The term "furnace pull" shall mean that amount of glass drawn from the glass furnace or furnaces.  
 (c) The term "oil" shall mean those components of a waste water amenable to measurement by the method described in "Methods for Chemical Analysis of Water and Wastes," 1971, Environmental Protection Agency, Analytical Quality Control Laboratory, page 217.  
 (d) The term "product frosted" shall mean that amount of glass etched with hydrofluoric acid.

(b) The term "furnace pull" shall mean that amount of glass drawn from the glass furnace or furnaces.  
 (c) The term "oil" shall mean those components of a waste water amenable to measurement by the method described in "Methods for Chemical Analysis of Water and Wastes," 1971, Environmental Protection Agency, Analytical Quality Control Laboratory, page 217.  
 (d) The term "product frosted" shall mean that amount of glass etched with hydrofluoric acid.

**§ 426.122 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.**

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which

can affect the industry subcategorization and effluent levels established. It is, however, possible that data, which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permits) that factors relating to the permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations. The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

(a) Any manufacturing plant which produces incandescent lamp envelopes shall meet the following limitations with regard to the forming operations.

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) g/kg of furnace pull		
Oil.....	230.0.....	115.0
TSS.....	230.0.....	115.0
pH.....	Within the range 6.0 to 9.0.	
(English units) lb/1000 lb of furnace pull		
Oil.....	0.23.....	.115
TSS.....	0.23.....	.115
pH.....	Within the range 6.0 to 9.0.	

(b) Any manufacturing plant which frosts incandescent lamp envelopes shall meet the following limitations with regard to the finishing operations.

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) g/kg of product frosted		
Fluoride	138.0	63.0
Ammonia	203.0	103.0
TSS	170.0	85.0
pH	Within the range 6.0 to 9.0.	
(English units) lb/1000 lb of product frosted		
Fluoride	0.14	.07
Ammonia	0.2	.1
TSS	0.17	.09
pH	Within the range 6.0 to 9.0.	

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) g/kg of product frosted		
Fluoride	14.0	7.0
Ammonia	203.0	103.0
TSS	34.0	17.0
pH	Within the range 6.0 to 9.0.	
(English units) lb/1000 lb of product frosted		
Fluoride	0.014	.007
Ammonia	0.2	.1
TSS	0.034	.017
pH	Within the range 6.0 to 9.0.	

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) g/kg of product frosted		
Fluoride	14.0	7.0
Ammonia	203.0	103.0
TSS	34.0	17.0
pH	Within the range 6.0 to 9.0.	
(English units) lb/1000 lb of product frosted		
Fluoride	0.014	.007
Ammonia	0.2	.1
TSS	0.034	.017
pH	Within the range 6.0 to 9.0.	

§ 426.123 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

(a) Any manufacturing plant which produces incandescent lamp envelopes shall meet the following limitations with regard to the forming operation.

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) g/kg of furnace pull		
Oil	46.0	23.0
TSS	46.0	23.0
pH	Within the range 6.0 to 9.0.	
(English units) lb/1000 lb of furnace pull		
Oil	0.045	.023
TSS	0.045	.023
pH	Within the range 6.0 to 9.0.	

(b) Any manufacturing plant which frosts incandescent lamp envelopes shall meet the following limitations with regard to the finishing operations.

§ 426.124 [Reserved]

§ 426.125 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

(a) Any manufacturing plant which produces incandescent lamp envelopes shall meet the following limitations with regard to the forming operations.

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
(Metric units) g/kg of furnace pull		
Oil	45.0	23.0
TSS	45.0	23.0
pH	Within the range 6.0 to 9.0.	
(English units) lb/1000 lb of furnace pull		
Oil	0.045	.023
TSS	0.045	.023
pH	Within the range 6.0 to 9.0.	

(b) Any manufacturing plant which frosts incandescent lamp envelopes shall meet the following limitations with regard to the finishing operations.

§ 426.126 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the incandescent lamp envelope manufacturing subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters), shall be the standard set forth in part 123 of this chapter, except that, for the purpose of this section, § 123.123 of this chapter shall be amended to read as follows: "In addition to the prohibitions set forth in § 123.121 of this chapter, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in § 426.125: *Provided*, That, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant."

Subpart M—Hand Frosted and Blown Glass Manufacturing Subcategory

§ 426.130 Applicability; description of the hand pressed and blown glass manufacturing subcategory.

The provisions of this subpart are applicable to discharges resulting from the process by which raw materials are

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melted in a furnace and processed by hand into pressed or blown glassware. This includes those plants which (a) produce leaded glass and employ acid finishing techniques, (b) produce non-leaded glass and employ acid finishing techniques, and (c) produce leaded or non-leaded glass and do not employ acid finishing techniques.

§ 426.131 Specialized definitions.

For the purpose of this subpart:

(a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in Part 401 of this chapter shall apply to this subpart.

(b) The term "process waste water" shall mean any water which, during the manufacturing process, comes into direct contact with any raw material, intermediate product, by-product, or product used in or resulting from the manufacture of hand pressed or blown glassware.

§ 426.132 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.

In establishing the limitations set forth in this section, EPA took into account all information it was able to collect, develop and solicit with respect to factors (such as age and size of plant, raw materials, manufacturing processes, products produced, treatment technology available, energy requirements and costs) which can affect the industry subcategorization and effluent levels established. It is, however, possible that data which would affect these limitations have not been available and, as a result, these limitations should be adjusted for certain plants in this industry. An individual discharger or other interested person may submit evidence to the Regional Administrator (or to the State, if the State has the authority to issue NPDES permits) that factors relating to the equipment or facilities involved, the process applied, or other such factors related to such discharger are fundamentally different from the factors considered in the establishment of the guidelines. On the basis of such evidence or other available information, the Regional Administrator (or the State) will make a written finding that such factors are or are not fundamentally different for that facility compared to those specified in the Development Document. If such fundamentally different factors are found to exist, the Regional Administrator or the State shall establish for the discharger effluent limitations in the NPDES permit either more or less stringent than the limitations established herein, to the extent dictated by such fundamentally different factors. Such limitations must be approved by the Administrator of the Environmental Protection Agency. The Administrator may approve or disapprove such limitations, specify other limitations, or initiate proceedings to revise these regulations. The following limita-

tions establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a point source subject to the provisions of this subpart after application of the best practicable control technology currently available:

(a) Any plant which melts raw materials, produces hand pressed or blown leaded glassware, employs acid finishing techniques, and discharges greater than 50 gallons per day of process waste water, shall meet the following limitations.

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
	mg/l	
Lead.....	2.0.....	1.0
Fluoride.....	30.0.....	15.0
TSS.....	50.0.....	25.0
pH.....	Within the range 6.0 to 9.0.	

(b) Any plant which melts raw materials, produces non-leaded hand pressed or blown glassware, discharges greater than 50 gallons per day of process waste water, and employs acid finishing techniques shall meet the following limitations.

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
	mg/l	
Fluoride.....	30.0.....	15.0
TSS.....	50.0.....	25.0
pH.....	Within the range 6.0 to 9.0.	

(c) Any plant which melts raw materials, produces leaded or non-leaded hand pressed or blown glassware, discharges greater than 50 gallons per day of process waste water, and does not employ acid finishing techniques shall meet the following limitations.

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
	mg/l	
TSS.....	50.0.....	25.0
pH.....	Within the range 6.0 to 9.0.	

§ 426.133 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best available technology economically achievable.

The following limitations establish the quantity or quality of pollutants or pollutant properties, controlled by this

section, which may be discharged by a point source subject to the provisions of this subpart after application of the best available technology economically achievable:

(a) Any plant which melts raw materials, produces hand pressed or blown leaded glassware, discharges greater than 50 gallons per day of process waste water, and employs acid finishing techniques shall meet the following limitations.

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
	mg/l	
Lead.....	0.2.....	0.1
Fluoride.....	4.0.....	2.0
TSS.....	10.0.....	5.0
pH.....	Within the range 6.0 to 9.0.	

(b) Any plant which melts raw materials, produces non-leaded hand pressed or blown glassware, discharges greater than 50 gallons per day of process waste water, and employs acid finishing techniques shall meet the following limitations.

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
	mg/l	
Fluoride.....	4.0.....	2.0
TSS.....	10.0.....	5.0
pH.....	Within the range 6.0 to 9.0.	

(c) Any plant which melts raw materials, produces leaded or non-leaded hand pressed or blown glassware, discharges greater than 50 gallons per day of process waste water, and does not employ acid finishing techniques shall meet the following limitations.

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
	mg/l	
TSS.....	10.0.....	5.0
pH.....	Within the range 6.0 to 9.0.	

§ 426.134 [Reserved]

§ 426.135 Standards of performance for new sources.

The following standards of performance establish the quantity or quality of pollutants or pollutant properties, controlled by this section, which may be discharged by a new source subject to the provisions of this subpart:

(a) Any plant which melts raw materials, produces hand pressed or blown leaded glassware, discharges greater than 50 gallons per day of process waste water, and employs acid finishing techniques shall meet the following limitations.

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
	mg/l	
Lead	0.2	0.1
Fluoride	4.0	2.0
TSS	10.0	5.0
pH	Within the range 6.0 to 9.0.	

(b) Any plant which melts raw materials, produces non-leaded hand pressed or blown glassware, discharges greater than 50 gallons per day of process waste water, and employs acid finishing techniques shall meet the following limitations.

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
	mg/l	
Fluoride	4.0	2.0
TSS	10.0	5.0
pH	Within the range 6.0 to 9.0.	

(c) Any plant which melts raw materials, produces leaded or non-leaded hand pressed or blown glassware, discharges greater than 50 gallons per day of process waste water, and does not employ acid finishing techniques shall meet the following limitations.

Effluent characteristic	Effluent limitations	
	Maximum for any one day	Average of daily values for thirty consecutive days shall not exceed
	mg/l	
TSS	10.0	5.0
pH	Within the range 6.0 to 9.0.	

§ 426.136 Pretreatment standards for new sources.

The pretreatment standards under section 307(c) of the Act for a source within the hand pressed and blown manufacturing subcategory, which is a user of a publicly owned treatment works (and which would be a new source subject to section 306 of the Act, if it were to discharge pollutants to the navigable waters) shall be the standard set forth in part 128 of this chapter, except that, for the purpose of this section, § 128.133 of this chapter shall be amended to read as follows: "In addition to the prohibitions set forth in § 128.131 of this chapter, the pretreatment standard for incompatible pollutants introduced into a publicly owned treatment works shall be the standard of performance for new sources specified in § 426.135; provided, That, if the publicly owned treatment works which receives the pollutants is committed, in its NPDES permit, to remove a specified percentage of any incompatible pollutant, the pretreatment standard applicable to users of such treatment works shall, except in the case of standards providing for no discharge of pollutants, be correspondingly reduced in stringency for that pollutant."

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